

isters, latches, etc., finite state machines, memory such as static random access memory or embedded dynamic random access memory, custom designed circuitry, programmable logic arrays, etc. Similarly, various units/circuits/components may be described as performing a task or tasks, for convenience in the description. Such descriptions should be interpreted as including the phrase “configured to.” Reciting a unit/circuit/component that is configured to perform one or more tasks is expressly intended not to invoke 35 U.S.C. § 112(f) interpretation for that unit/circuit/component.

[0020] In an embodiment, hardware circuits in accordance with this disclosure may be implemented by coding the description of the circuit in a hardware description language (HDL) such as Verilog or VHDL. The HDL description may be synthesized against a library of cells designed for a given integrated circuit fabrication technology, and may be modified for timing, power, and other reasons to result in a final design database that may be transmitted to a foundry to generate masks and ultimately produce the integrated circuit. Some hardware circuits or portions thereof may also be custom-designed in a schematic editor and captured into the integrated circuit design along with synthesized circuitry. The integrated circuits may include transistors and may further include other circuit elements (e.g. passive elements such as capacitors, resistors, inductors, etc.) and interconnect between the transistors and circuit elements. Some embodiments may implement multiple integrated circuits coupled together to implement the hardware circuits, and/or discrete elements may be used in some embodiments.

[0021] The scope of the present disclosure includes any feature or combination of features disclosed herein (either explicitly or implicitly), or any generalization thereof, whether or not it mitigates any or all of the problems addressed herein. Accordingly, new claims may be formulated during prosecution of this application (or an application claiming priority thereto) to any such combination of features. In particular, with reference to the appended claims, features from dependent claims may be combined with those of the independent claims and features from respective independent claims may be combined in any appropriate manner and not merely in the specific combinations enumerated in the appended claims.

DETAILED DESCRIPTION OF EMBODIMENTS

[0022] This specification includes references to “one embodiment” or “an embodiment.” The appearances of the phrases “in one embodiment” or “in an embodiment” do not necessarily refer to the same embodiment, although embodiments that include any combination of the features are generally contemplated, unless expressly disclaimed herein. Particular features, structures, or characteristics may be combined in any suitable manner consistent with this disclosure.

[0023] The present disclosure further contemplates that the entities responsible for the collection, analysis, disclosure, transfer, storage, or other use of such personal information data will comply with well-established privacy policies and/or privacy practices. In particular, such entities should implement and consistently use privacy policies and practices that are generally recognized as meeting or exceeding industry or governmental requirements for maintaining personal information data private and secure. For example, in the case of unlocking and/or authorizing devices using facial recognition, personal information from users should

be collected for legitimate and reasonable uses of the entity and not shared or sold outside of those legitimate uses. Further, such collection should occur only after receiving the informed consent of the users. Additionally, such entities would take any needed steps for safeguarding and securing access to such personal information data and ensuring that others with access to the personal information data adhere to their privacy policies and procedures. Further, such entities can subject themselves to evaluation by third parties to certify their adherence to widely accepted privacy policies and practices.

[0024] Despite the foregoing, the present disclosure also contemplates embodiments in which users selectively block the use of, or access to, personal information data. That is, the present disclosure contemplates that hardware and/or software elements can be provided to prevent or block access to such personal information data. For example, the present technology can be configured to allow users to select to “opt in” or “opt out” of participation in the collection of personal information data during registration for services.

[0025] FIG. 1 depicts a representation of an embodiment of a device including a camera. In certain embodiments, device **100** includes camera **102**, processor **104**, memory **106**, and display **108**. Device **100** may be a small computing device, which may be, in some cases, small enough to be handheld (and hence also commonly known as a handheld computer or simply a handheld). In certain embodiments, device **100** is any of various types of computer systems devices which are mobile or portable and which perform wireless communications using WLAN communication (e.g., a “mobile device”). Examples of mobile devices include mobile telephones or smart phones, and tablet computers. Various other types of devices may fall into this category if they include wireless or RF communication capabilities (e.g., Wi-Fi, cellular, and/or Bluetooth), such as laptop computers, portable gaming devices, portable Internet devices, and other handheld devices, as well as wearable devices such as smart watches, smart glasses, headphones, pendants, earpieces, etc. In general, the term “mobile device” can be broadly defined to encompass any electronic, computing, and/or telecommunications device (or combination of devices) which is easily transported by a user and capable of wireless communication using, for example, WLAN, Wi-Fi, cellular, and/or Bluetooth. In certain embodiments, device **100** includes any device used by a user with processor **104**, memory **106**, and display **108**. Display **108** may be, for example, an LCD screen or touchscreen. In some embodiments, display **108** includes a user input interface for device **100** (e.g., the display allows interactive input for the user).

[0026] Camera **102** may be used to capture images of the external environment of device **100**. In certain embodiments, camera **102** is positioned to capture images in front of display **108**. Camera **102** may be positioned to capture images of the user (e.g., the user’s face) while the user interacts with display **108**. FIG. 2 depicts a representation of an embodiment of camera **102**. In certain embodiments, camera **102** includes one or more lenses and one or more image sensors **103** for capturing digital images. Digital images captured by camera **102** may include, for example, still images, video images, and/or frame-by-frame images.

[0027] In certain embodiments, camera **102** includes image sensor **103**. Image sensor **103** may be, for example, an array of sensors. Sensors in the sensor array may include,